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The United States of America



Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person or persons having title to this patent the right to exclude others from making, using or selling the invention throughout the United States of America for the term of seventeen years from the date of this patent, subject to the payment of maintenance fees as provided by law.

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Commissioner of Patents and Trademarks

Miscilla Huller



United States Patent [19]

Baumgartner et al.

[11] Patent Number:

5,350,131

[45] Date of Patent:

Sep. 27, 1994

[54]	FISHING REELS WITH A SPOOL RECEIVING THE FISHING LINE					
[75]	Inventors:	Diet	ter Baumgartner, Theilenhofen; er Hamann, Gunzenhausen, both ed. Rep. of Germany			
[73]	Assignee:	Man	M. Deutsche Angelgerate ufaktur Hellmuth Kuntze GmbH o. KG, Fed. Rep. of Germany			
[21]	Appl. No.:	788,	801			
[22]	Filed:	Nov	. 7, 1991			
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Nov	. 10, 1990 [D	E]	Fed. Rep. of Germany 4035846			
[52]	U.S. Cl		A01K 89/015 242/242; 242/43 R 242/158.1, 158.5, 43 R, 242/241, 242			
[56]		Re	ferences Cited			
U.S. PATENT DOCUMENTS						
	4,191,343 3/ 5,143,318 9/	1980 1992	Shakespeare et al. 242/242 Morishita 242/242 Tipton et al. 242/241			
FOREIGN PATENT DOCUMENTS						
		1954 1956	Fed. Rep. of Germany 242/242			

7007657	3/1970	Fed. Rep. of Germany .
3417716	11/1985	Fed. Rep. of Germany 242/43 R
2264480	10/1975	France 242/242
694177	9/1965	Italy 242/242
0006497	2/1974	Japan 242/43 R
0867/87	5/1989	Rep. of Korea .
		Rep. of Korea .

Primary Examiner—Katherine Matecki Attorney, Agent, or Firm—Bacon & Thomas

7] ABSTRACT

In a fishing reel of the type in which the spool for receiving the fishing line is caused to move to and fro in the direction of its winding axis in response to a cam drive for driving a spindle attached to the spool, the cam drive including a guide part with a guide slot into which projects an eccentrically mounted cam stud, the guide slot is in the form of an elongated S in order to impart an acceleration to the spool at its reversing points, and thereby prevent formation of bulges at the sides of the spool during winding. The locations in the guide slot corresponding to reversing points of the spool are offset from a center line of the guide slots along a longitudinal axis of the slot in a direction perpendicular to the stroke direction, resulting in the above-described acceleration and also having the effect of increasing displacement of the cam drive mechanism in the stroke direction.

6 Claims, 5 Drawing Sheets

